

he thrives. In his letter dated May 3rd the Curator of Mammals, London Zoo, wrote: 'Tishi has settled in splendidly and is in marvellous condition. He is a superb exhibit . . . We have already recorded a television programme . . . in which Tishi featured and I must say he looked magnificent when I saw the recording that was made.'

EVERGREEN COTTAGE,  
UPPER SHILLONG,  
ASSAM,  
May 28, 1961.

E. P. GEE

#### 4. WHAT DO LARGE PREDATORS IN THE FOREST LIVE ON?

In January 1961 Mr. C. E. Norris, of Pingarawa Estate, Namunukula, Ceylon, wrote to us commenting on Mrs. Jamal Ara's estimate of the large predator population in her ecological survey of the Hazaribagh National Park (*J. Bombay nat. Hist. Soc.* 57: 325-338 at p. 334). He pointed out that, at an assumed killing rate of one per week per predator and a recruitment rate of 20% per year for the large herbivore population, there would have to be a herbivore population of  $20 \times 52 \times 5 = 5200$  to feed the ten tigers and ten leopards estimated as living in the Park, whereas the estimate of the deer population of the park is only 235. Mrs. Jamal Ara replied by calculations showing the absurd results that followed from the assumptions on which Mr. Norris's figures were based. For instance, the Palamau Forest Division in Bihar State, estimated by the Forest Department in the 1930s to have a tiger population of 35 and perhaps a leopard population of 25, would require for their maintenance a herbivore population of  $60 \times 52 \times 5 = 15,600$ , a figure that even the most ardent admirer of the richness of Palamau forest life would not accept as possible. Similarly, the population of 250 lions recently estimated to live in the Gir Forest would require a herbivore population of 65,000. As a result of this correspondence Mr. Norris has re-examined the question and, after consulting naturalists, game-wardens, and other knowledgeable persons in Ceylon, Africa, and India, writes that the old belief of one kill per week is 'very far from correct', and that in the course of his inquiries he has collected some 'interesting data' which he is in the process of analysing. While we

await his report it would be interesting to have some other opinions too.

BOMBAY NATURAL HISTORY SOCIETY,  
91, WALKESHWAR ROAD,  
BOMBAY 6,  
July 29, 1961.

EDITORS

5. COMMUNAL DISTRACTION DISPLAY IN LARGE GREY  
BABBLER [*TURDOIDES MALCOLMI* (SYKES)]

A pair of Large Grey Babblers [*Turdoides malcolmi* (Sykes)] breed regularly in a solitary thorny tree in my compound here. On 19 May 1961 there were four fledglings in the nest, being fed by the parents while the rest of the flock of babblers from time to time would gather close by watching for danger and giving alarm on sighting a crow, or mongoose, or pariah kite. On 25 May 1961 one of the fledglings flew out of the nest and probably perished in a heavy rain storm which occurred that evening. Another fledgling was missing after the storm. On 29 May 1961 the two remaining fledglings left the nest and hopped about on the ground, either following the group of babblers or being followed by them. As the fledglings were at the mercy of a mongoose living close by, the babblers defended the young in a group, fluttering their wings and guiding the young ones in the direction they ought to follow. The whole flock of 8 babblers would surround the fledglings and flutter their wings. The babblers appeared to be acting as a group, attracting attention to themselves and distracting likely enemies from the young, and also somewhat guiding the young. During my few days' observation I noticed that only the parents fed the young, and the rest of the group cordoned the young ones when on the ground and were constantly on the look out for danger. The group of birds now and then fluttered their wings and often babbled in unison. When the group left for feeding, one pair of babblers which I recognised to be the parents of the fledglings remained with the young. Although communal feeding of the young is possible, I did not see it being done in this instance.

DIL BAHAR,  
BHAVNAGAR,  
June 6, 1961.

R. S. DHARMAKUMARSINHJI